
III. The Twenties (1920-1929)

Technological progress and continued adaptation of aircraft to fleet use characterized Naval Aviation during the twenties. There were important organizational changes as well. In 1921, Congress established a Bureau of Aeronautics with Rear Admiral William A. Moffett as its first Chief. The position of Naval Aviation was further secured with the creation of an Assistant Secretary of the Navy for Air, a post first held by Edward P. Warner and then by David S. Ingalls, the Navy's first ace.

From a small air detachment with each fleet, the Navy's air arm grew to three aircraft carriers with assigned fighter, torpedo and bombing squadrons; patrol squadrons operating from seaplane tenders; and scouting aircraft regularly assigned to battleships and cruisers. Naval aircraft went to sea with better instruments, radios and bombsights. Efficient and reliable air-cooled radial engines came into being during this period. They proved to be so successful that this type engine was used in Navy planes until all-jet aircraft entered the fleet.

The Navy and Marine Corps participated widely in the Schneider, Curtiss Marine, Pulitzer and Thompson races of the 1920s and early 1930s. Air racing during this period had a far more functional purpose than merely putting on a good show for a thrill-seeking audience. The machines were test beds for innovative designs and the races drove these planes to their outermost limits. The high-performance aircraft of WW II and beyond were a direct legacy of this colorful era. Sleek U.S. Navy racing planes and pilots like Acosta, Williams, Gorton, Rittenhouse, Grant, Jeter and Tomlinson took top honors in some of the world's great speed contests. Marines like Lutz and Page did the same.

Meanwhile, *Langley*, the Navy's first aircraft carrier, had been commissioned in March 1922. In October of that year, Lieutenant V. C. Griffin made the first takeoff from *Langley*, and a few days later Lt. Cdr. G. deC. Chevalier made the U.S. Navy's first carrier landing while the ship was underway.

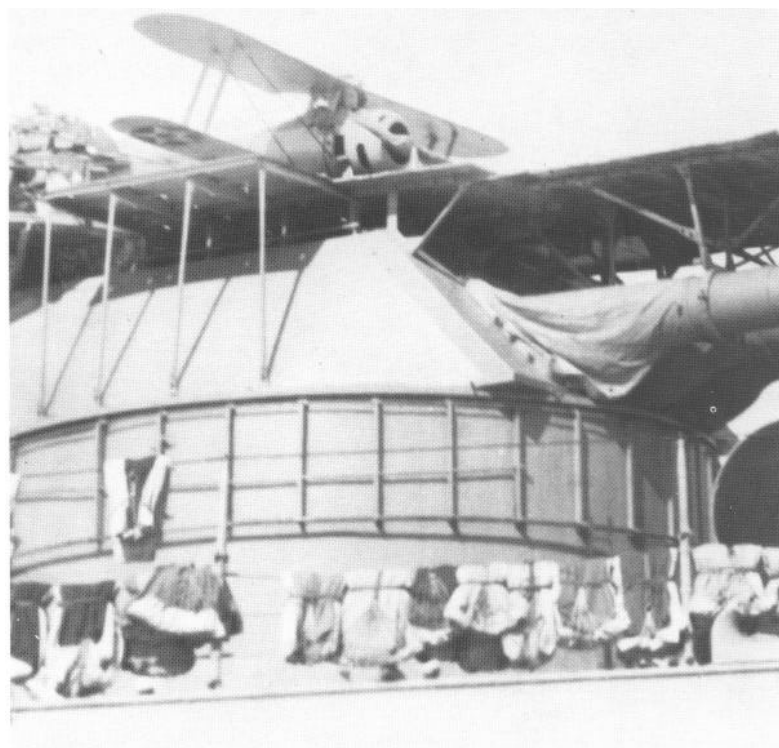
During the 1920s, the Navy worked out takeoff and landing techniques and developed arresting and launching devices. One early platform for testing an arrestment system was a huge turntable. Lieutenant A. M. Pride headed the project which produced a system that was activated by compressed air, and later by a powder charge. Its success provided valuable experience in the development of future arresting devices.

Experimental development of large patrol planes continued. In 1925, Commander John Rodgers and his crew attempted to fly a PN-9 from San Francisco to Hawaii. Although unpredicted headwinds caused them to run out of fuel short of their goal, a



The Bureau of Aeronautics under RAdm. William A. Moffett was established as an organizational unit of the Navy Department in September 1921. NA 80-G-458493

The 1920s saw much attention centered on marrying the airplane to fleet operations. Here, a Nieuport 28, one of 12 acquired from the Army's WW I inventory, was positioned atop a flying-off platform mounted over a turret of the battleship Arizona (BB-39). The year was 1921. NH 43918





world's distance record for seaplanes was established. Rigging a makeshift sail, Rodgers and company sailed the aircraft backwards to their destination, demonstrating the ruggedness of the metal-hulled PN-9 and its ability to hold the sea in adverse conditions.

Naval Aviation as an offensive weapon made enormous strides as tactics were developed to match the improved capabilities of the aircraft. The techniques of dive-bombing, torpedo attack, spotting for gunfire and scouting were refined. Marine Corps expeditionary troops learned the value of and perfected the close air support mission. Navy aircrews made training flights from advanced bases and put the knowledge acquired to new uses in photographic surveys and polar exploration.

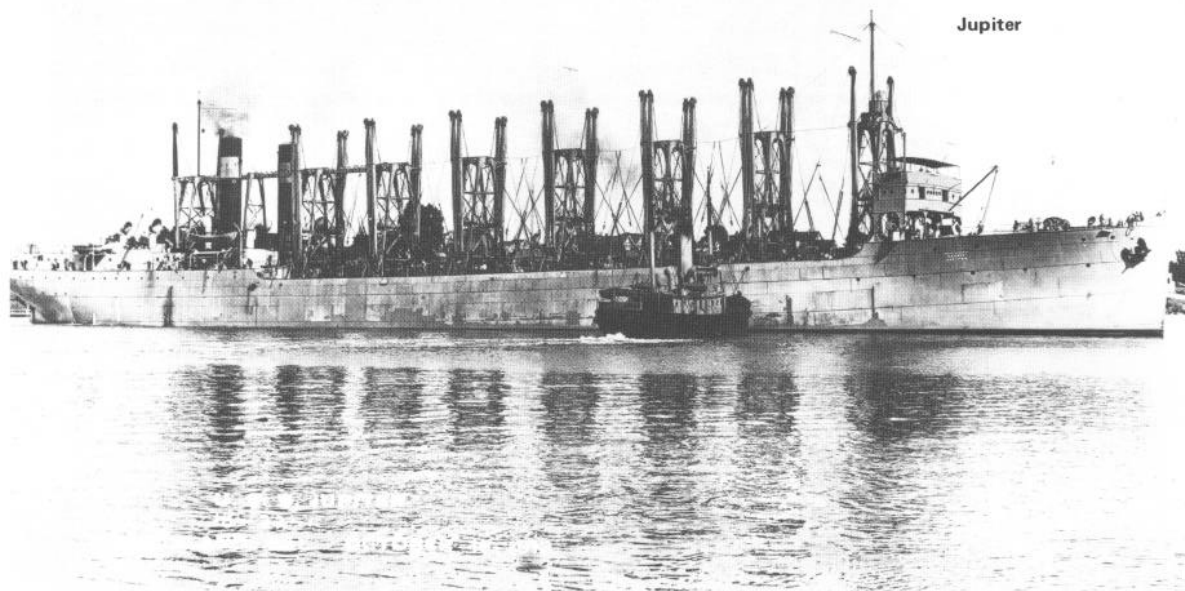
In May 1926, Lieutenant Commander Richard E. Byrd and Aviation Pilot Floyd Bennett made the first flight over the North Pole, in a Fokker trimotor named *Josephine Ford*. Cdr. Byrd added another historic milestone to his naval career in November 1929 when he flew the Ford trimotor *Floyd Bennett* over the South Pole, becoming the first man to fly over both Poles.

In June 1926, elements of the Alaskan Aerial Survey Expedition embarked on an aerial photographic mapping mission never before attempted — to survey the unexplored regions of the mainland of southeastern Alaska. Under the command of Lieutenant B. H. Wyatt, the expedition was composed of five officers and 40 enlisted men, the tender *Gannet*, the barge YF 88 which housed a photo lab, and three Loening amphibians. To carry on this work, the Alaskan Aerial Survey Detachment was established in April 1929 at San Diego, under the leadership of officer in charge Lieutenant Commander Arthur W. Radford.

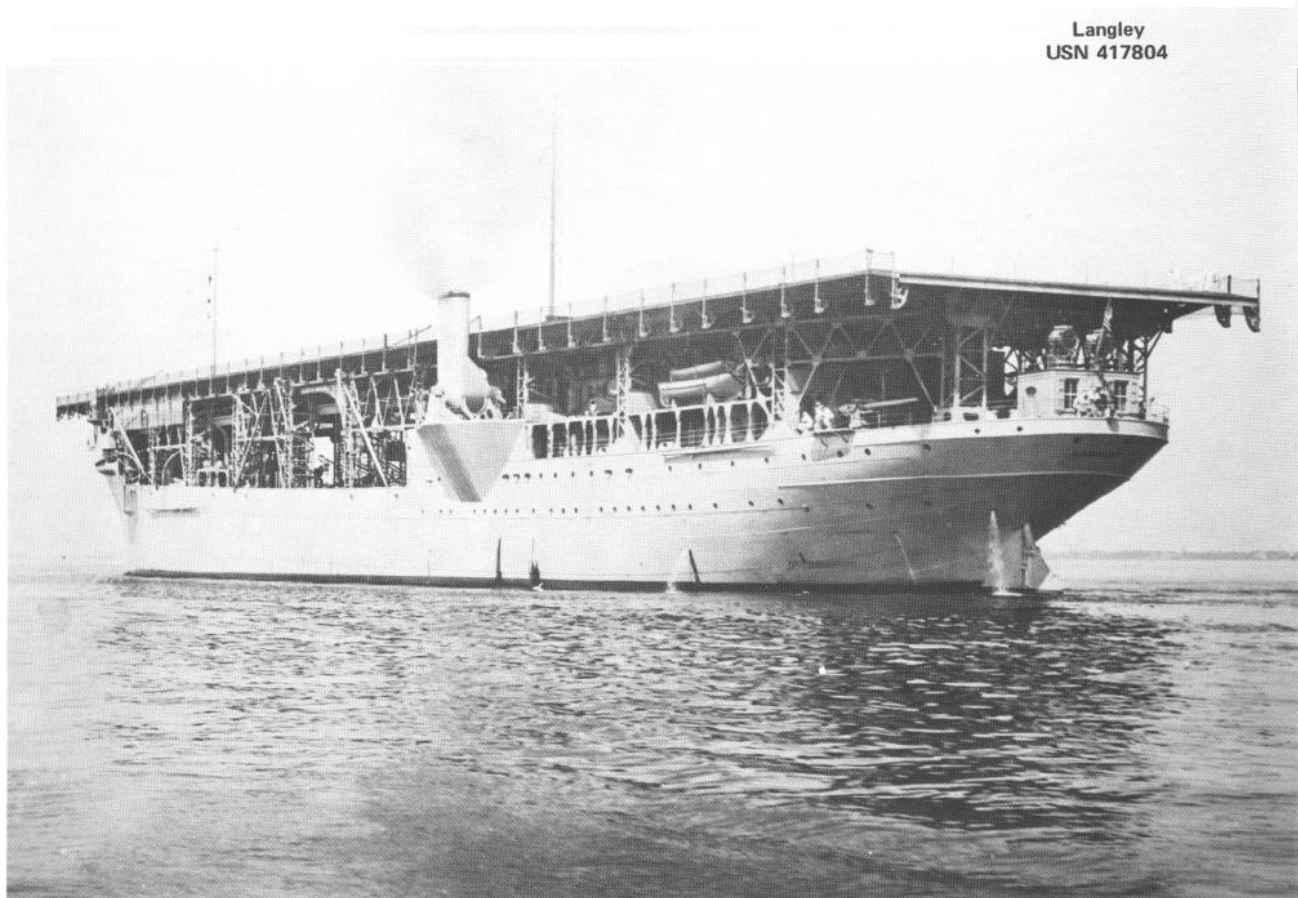
Added to these significant developments in Naval Aviation during the years following WW I was the expanded operation of the rigid airship. Capable of long-range scouting missions and of carrying their own fighter protection, the huge airships could also travel at three times the speed of the fastest surface vessel. Several tragic accidents eventually led to the abandonment of the rigid airship during the 1930s, but the nonrigid blimp went on to provide valuable service during WW II.

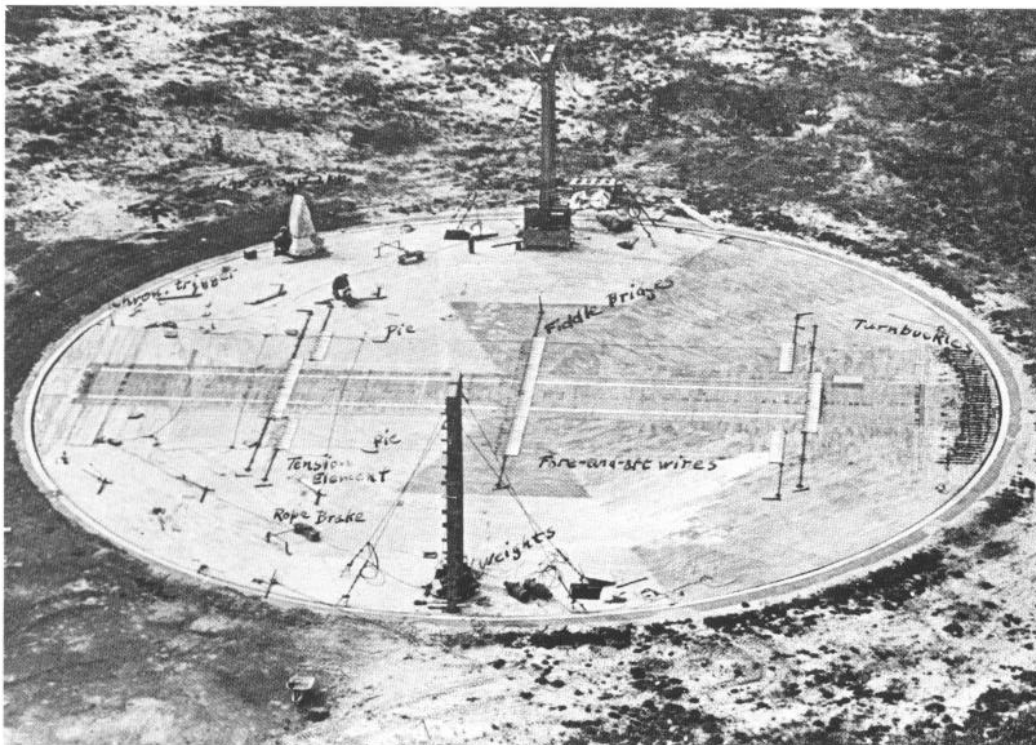
Advancements in aircraft and tactics highlighted the twenties, and the carrier established itself as an integral part of fleet operations. By the end of the decade, two sister carriers, *Lexington* and *Saratoga*, had been commissioned and added to the fleet. These two historic vessels were among the few carriers responsible for stemming the Japanese onslaught in the Pacific in 1942.

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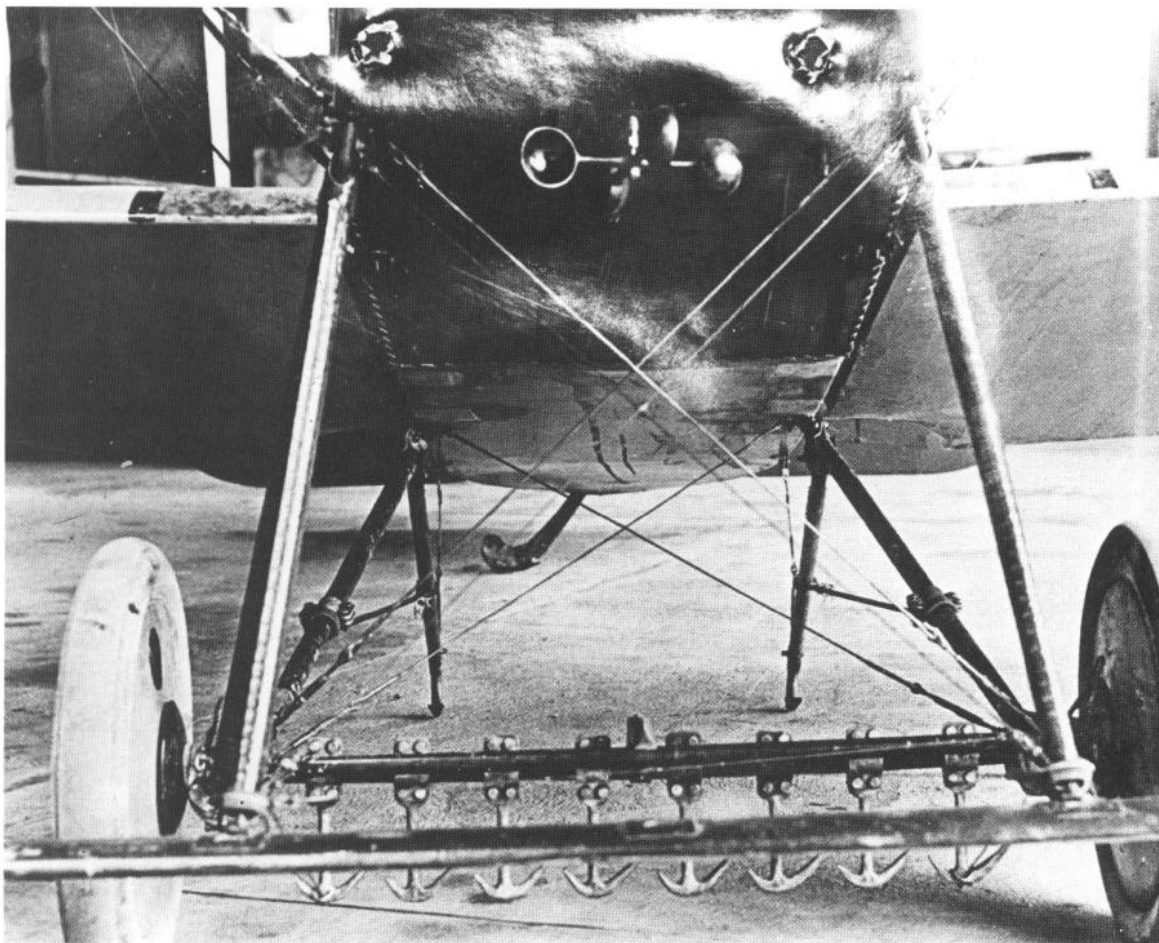


The U.S. Navy's first floating airfield. On March 20, 1922, the former collier Jupiter was commissioned as the aircraft carrier Langley (CV-1).





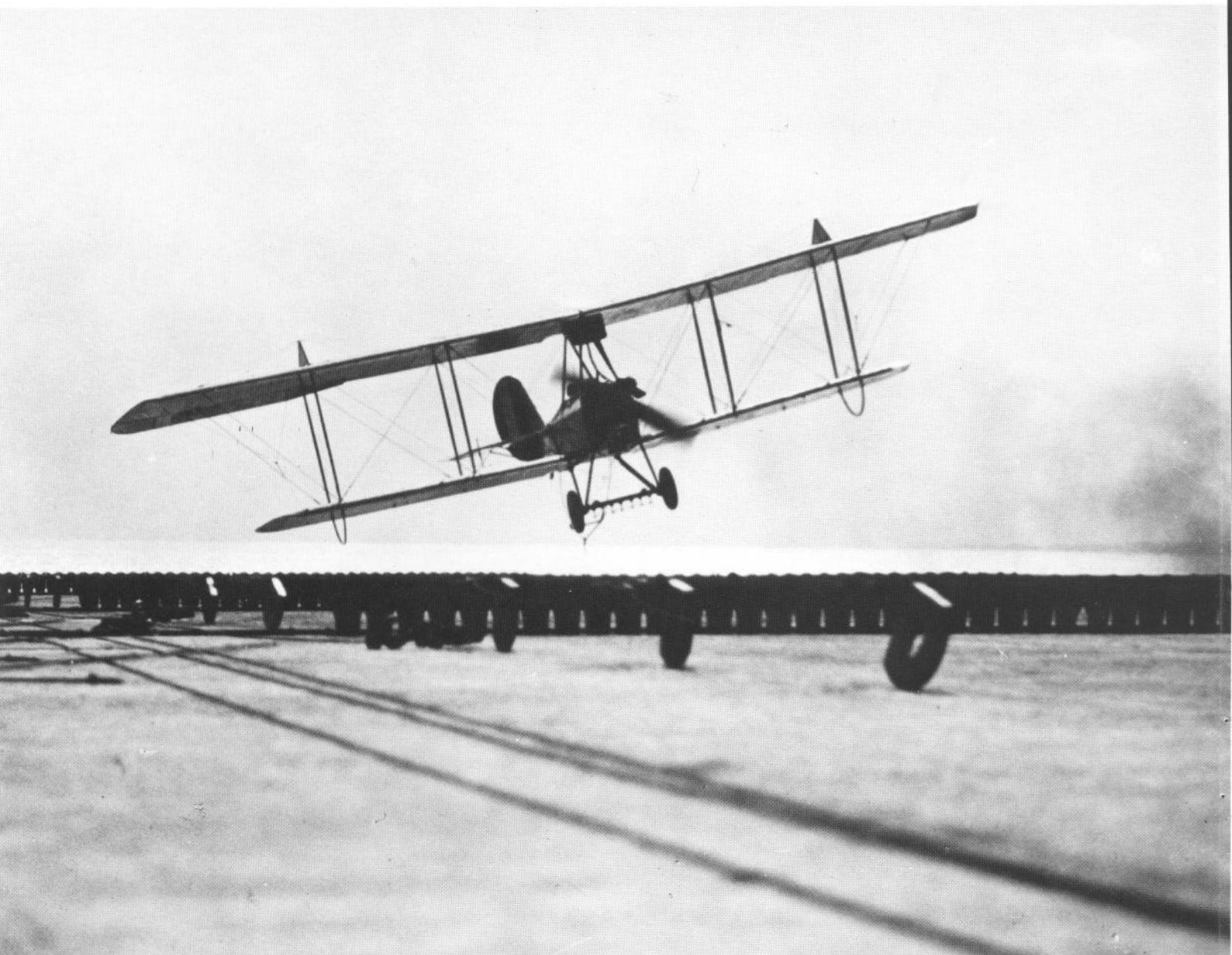
Much time and effort was expended to develop a practical arresting system for the new carrier. A dummy platform was erected at NAS Hampton Roads, Va., to try out various ideas. One arrangement, later employed on Langley, used a series of hooks attached to the undercarriage of the aircraft.



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Griffin (left) and Chevalier NH 76210

The U.S. Navy's first takeoff from an aircraft carrier was made from Langley by Lt. Virgil C. Griffin in a Vought VE-7SF on October 17, 1922. Langley was at anchor in the York River, Va. Lt.Cdr. Godfrey deC. Chevalier made the first landing while underway off Cape Henry, Va., on October 26. Shown here is Chevalier just prior to touchdown.
NA 19-NS-26-1





The Navy's first rigid airship, Shenandoah (ZR-1), made its maiden flight in September 1923. It was also the first dirigible to use helium instead of hydrogen. **USN 428443**



Williams

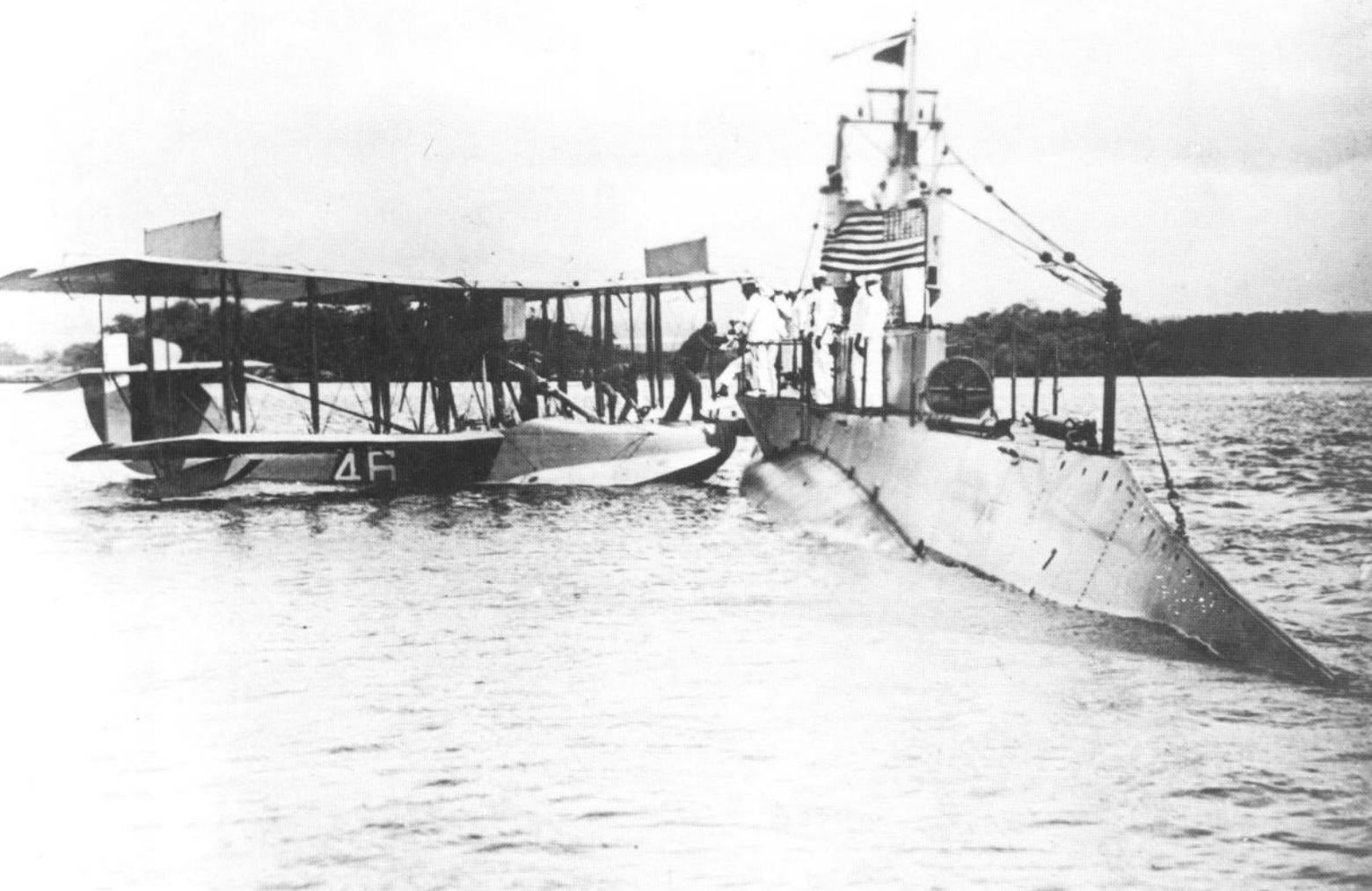


The air races of the 1920s served as developing grounds for the combat aircraft which began to take form in the late 1930s. U.S. Navy aircraft and pilots took many top honors in the great racing events of the decade, including the Curtiss Marine, Pulitzer and Schneider Cup competitions. Pictured is Lt. Alford A. "Al" Williams on a takeoff run during the Pulitzer races of 1923, where he set two new world speed records for 100 and 200 kilometers. **AN 8877**

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The MacMillan Arctic Expedition to Greenland of 1925 employed a Naval Air Detail under Lt.Cdr. Richard E. Byrd to probe further northward over the ice cap. Shown here is one of the three Loening OL-2 amphibians used in the endeavor. NH 44242

Integration of the airplane into fleet operations continued as an overriding theme. Here, a Curtiss HS-2L flying boat participated in operations with an S-1 type submarine in 1924. NH 60769



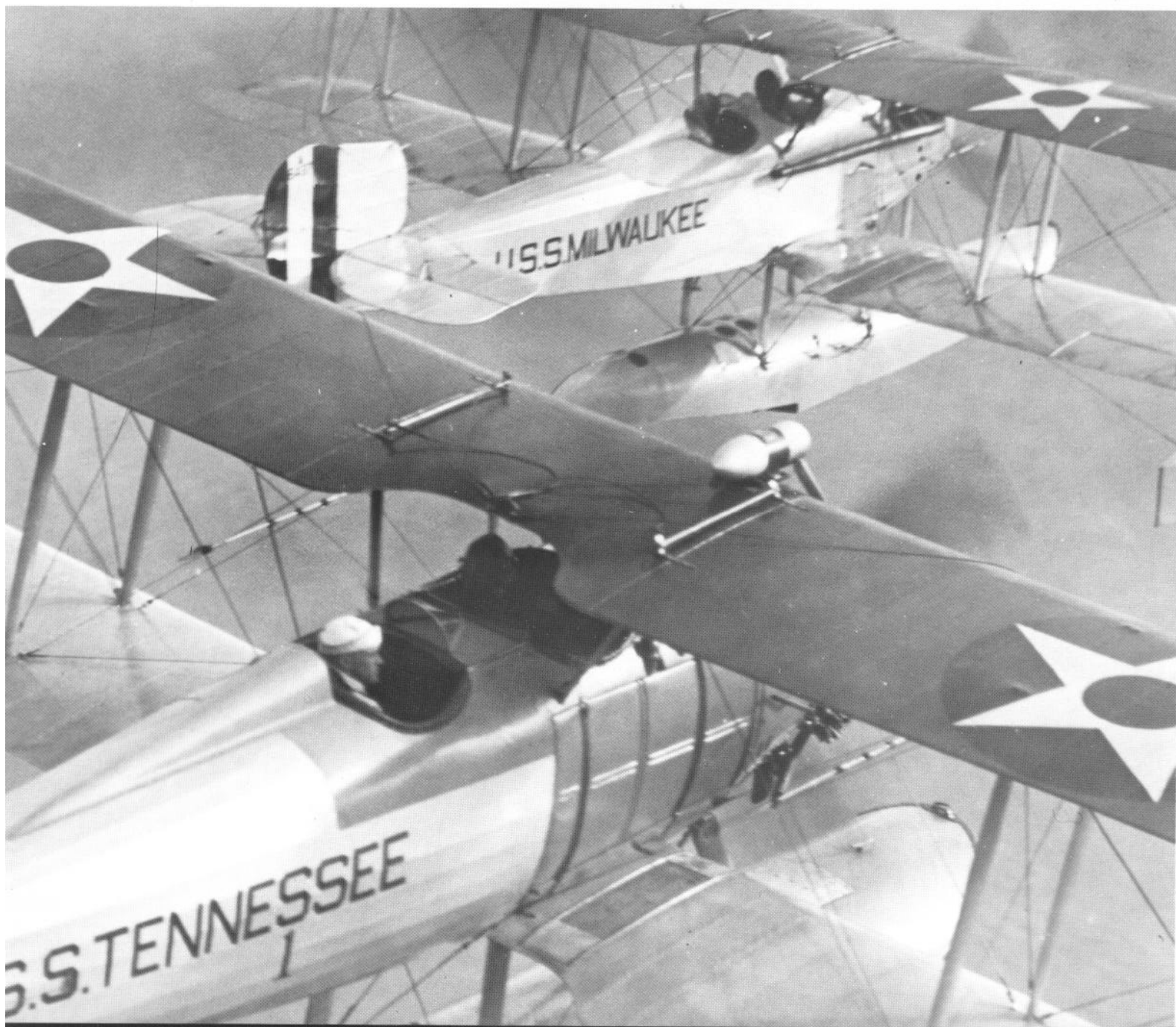
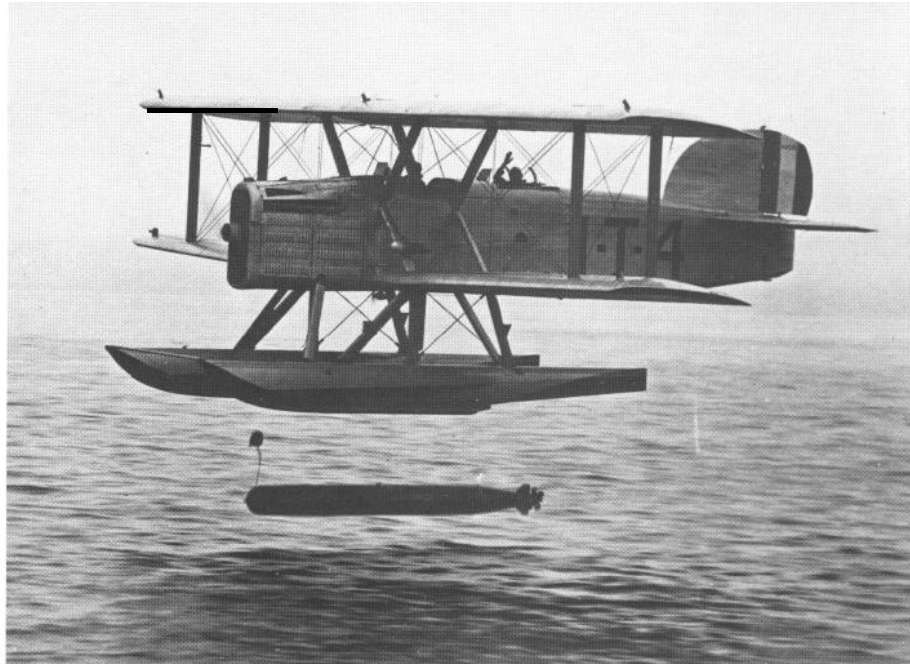


In a dramatic attempt to fly nonstop from San Francisco to Hawaii in 1925, Cdr. John Rodgers and his crew, in a PN-9 flying boat, went down at sea short of their goal. Rigging a sail from wing fabric, they proceeded by wind power to their destination. The actual distance flown in this endeavor became a new world record for Class C seaplanes, which remained unbroken for nearly five years. Left to right are third pilot Kiles R. Pope, pilot Lt. Bryron J. Connell, aircraft commander Rodgers, mechanic William H. Bowlin and radioman Otis G. Stantz.

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The decade of the twenties saw considerable experimentation with aerial torpedoes. Here, a Douglas DT-2 makes a drop.

The use of catapult-launched scout aircraft from battleships and cruisers became routine. Shown here are a Vought VE-9H from the cruiser Milwaukee (CL-5) and a Vought UO-1 from the battleship Tennessee (BB-43). NH 72919

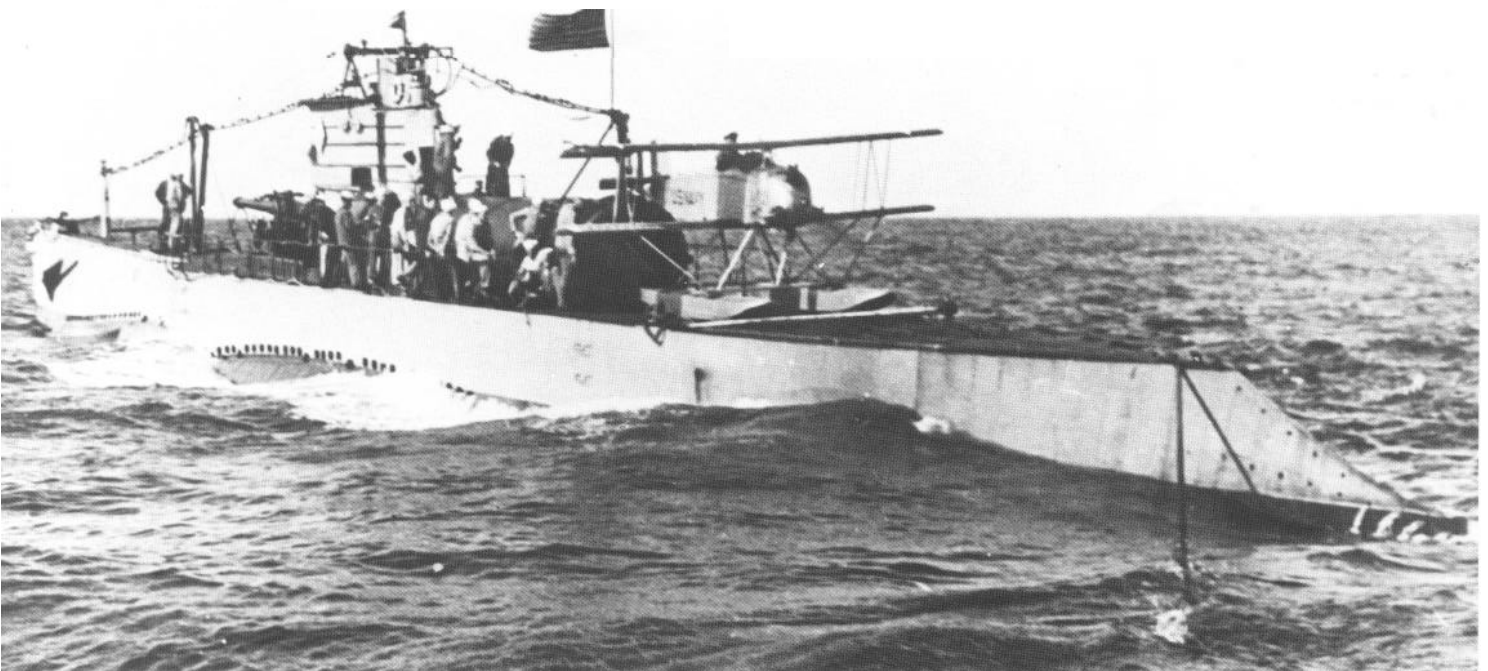


Byrd NA 306-NT-549-6



Bennett NH 55481

1926 marked the world's first flight over the North Pole. Lt.Cdr. Richard E. Byrd and Aviation Pilot Floyd Bennett used this trimotored Fokker TA-1 in their successful attempt. Byrd repeated this feat over the South Pole in 1929 with Bernt Balchen as pilot.



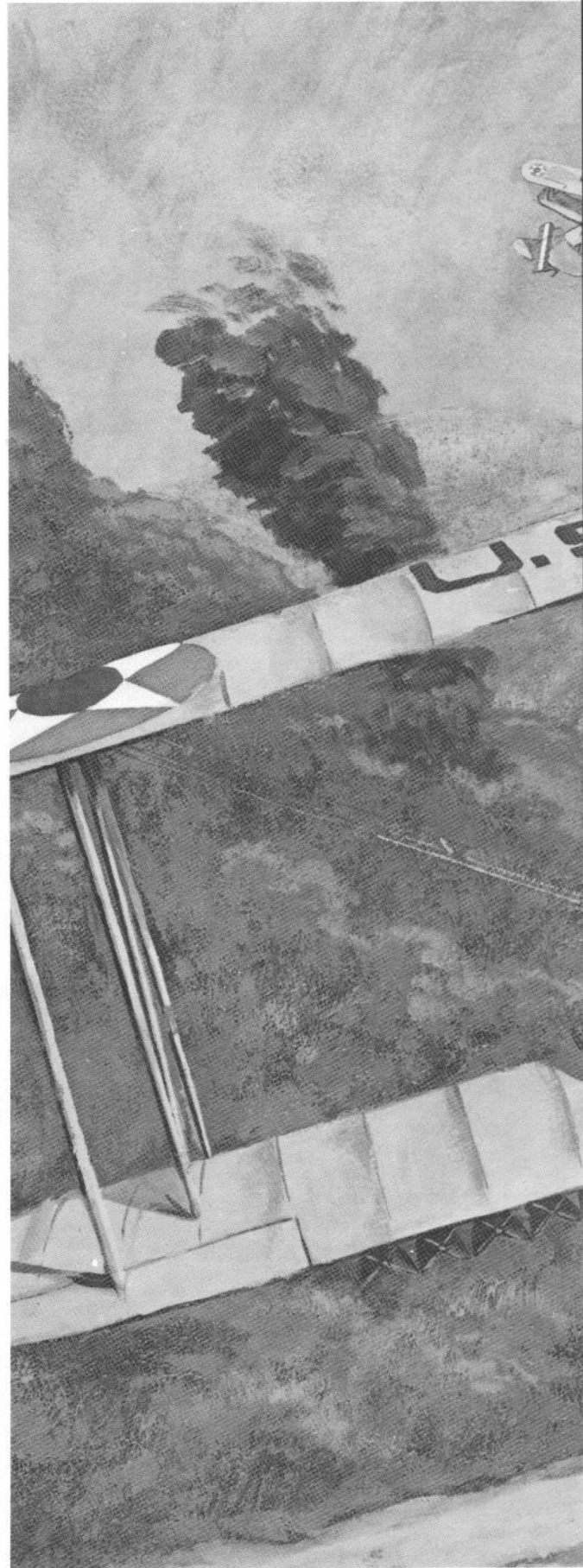
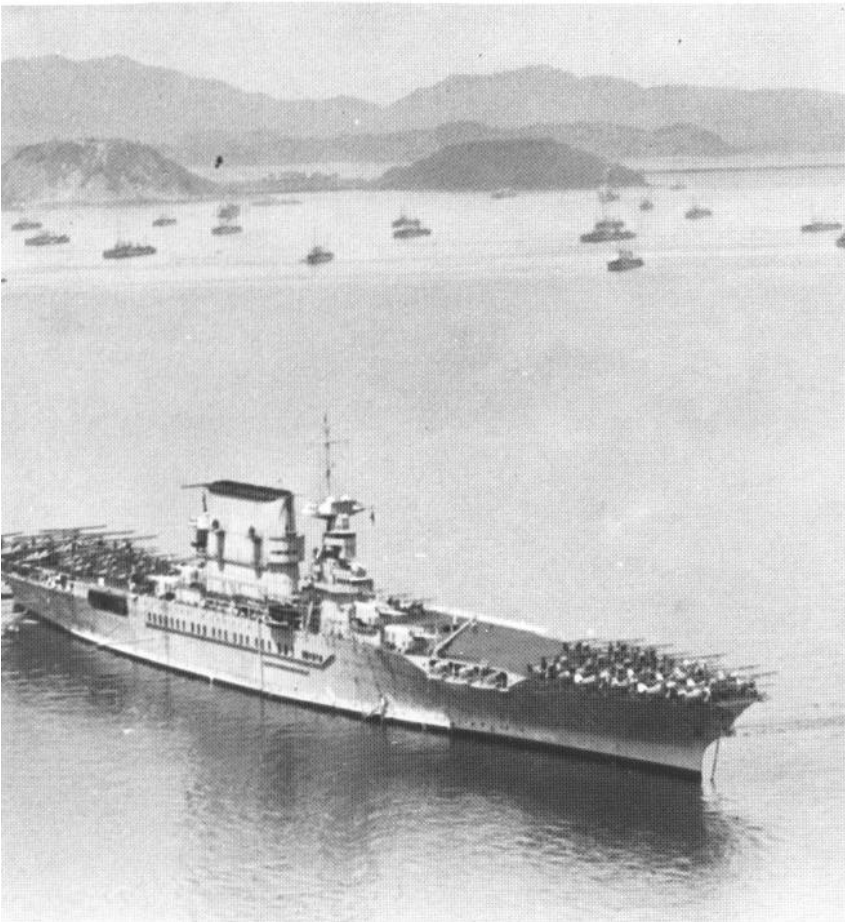
The Navy also investigated the feasibility of operating aircraft from submarines. In May 1926, the submarine S-1 surfaced and launched a Cox Klemin XS-2. USN 1053777

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Artist Lt.Col. A. Michael Leahy. USMCR(Ret.).
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The Marines also made strides during the twenties toward development of the airplane's mission in terms of the Corps' own special brand of warfare. These Curtiss OC-2 Falcons provided credibility to the concept of close air support during the Nicaraguan campaign.

The carriers Lexington (CV-2) and Saratoga (CV-3) were commissioned in November and December 1927, respectively. Saratoga is seen anchored off Panama in the late 1920s.





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Airships participated in fleet operations. Here, Los Angeles (ZR-3) is seen with carriers Lexington (CV-2) and Saratoga (CV-3) and the airship tender Patoka (AO-9). The accompanying photo shows Los Angeles landing aboard Saratoga in 1928. NA 80-G-463051



Lt. Charles E. Rosendahl survived the crash of Shenandoah on September 3, 1925, and later commanded Los Angeles. He was a lifelong advocate of Navy lighter-than-air. NA 80-G-186732